

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-12 are presently active in this case, no change in claim scope is contemplated by this amendment.

In the outstanding Official Action, the abstract was objected to for informalities; Claim 11 was rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,570,883b1 to Wong, and Claims 1-10 and 12 were allowed.

First, Applicants wish to thank Examiner Phunkulh for the June 15, 2004 personal interview at which time the outstanding issues in this case were discussed. During the discussion, Applicants presented amendments and arguments substantially as indicated in this response. While no agreement was reached, Examiner Phunkulh confirmed his understanding of our position in this case and indicated that he would have to conduct a further search upon filing of our formal response.

In addition, Applicants wish to thank Examiner Phunkulh for allowance of Claims 1-10 and 12.

With regard to the objection to the abstract, submitted herewith is a new abstract on a separate sheet, which corrects the informalities noted in the outstanding Official Action. In addition, Applicants have amended the specification to include section headings as suggested in the Manual of Patent Examining Procedure (MPEP).

Turning now to the merits, Applicants' invention is directed to a method and system for determining packet transmission priority between a plurality of data streams. As discussed in the June 15, 2004 interview, the present invention overcomes the shortcomings of prior art methods by taking advantage of the peculiarities of an ATM system. Specifically, since the cells of an ATM system are fixed in size, the specification alone of an inter-cell

period is sufficient to define a transmission speed and to control it. It is therefore possible to take advantage of this characteristic to define the transmission speed of a stream of packets segmented by an ATM adaptation layer by specifying an inter-segment period. The calculation of a theoretical sending or receiving time can then be performed by means of a simple addition/accumulation of the inter-segment period at the time of the processing of each segment of a packet by the adaptation layer. This calculation allows the segments to be associated with a time label indicating a theoretical arrival time for the packet in accordance with the present invention.

Thus, Applicants at Claim 11 recites a method of determining transmission priority for data packets between data streams, each data stream having a plurality of data packets for transmission to a destination. The method includes for each data stream, serially arranging the data packets into a stream queue having a front, assigning a time label to each data packet, the time label containing data indicating an estimated arrival time for the data packet at a segmentation and multiplexing device. The time label of a front data packet is sent to a priority queue containing other time labels of other front data packets, a front data packet being the data packet at the front of a stream queue, and the time label of the front data packet is associated with the data stream which contains the front data packet assigned to the time label. It is then determined which time label in the priority queue has an earliest estimated arrival time and transmission priority is given to the data stream associated with the time label having the earliest estimated arrival time, the transmission priority being for transmitting the front data packet assigned to the time label having the earliest estimated arrival time.

In contrast, the cited reference to Wong discloses a packet scheduling method using a dual weight single priority queue. As disclosed in Wong, input traffic flows with different QOS requirements are temporarily stored in a FIFO queue, and the time domain is divided

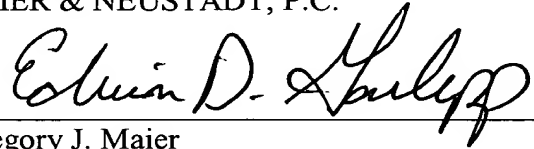
into recurring synchronous frames, and asynchronous frames. The packet scheduler of Wong alternates between synchronous frame access and asynchronous frame access in transmitting the packets. The synchronous frame access always has a higher priority than the asynchronous frame access, and among the backlogged flow queues with available bandwidth credits packets in the higher real-time priority flow queues are always transmitted before packets in the lower real-time priority flow queues.

Thus, Wong et al. discloses a system wherein packets are prioritized based on the synchronous or asynchronous nature of the packets. However, there is no discussion in Wong et al. of assigning a time label to each data packet, sending the time label of a front data packet to a priority queue and determining which time label in the priority queue has an earliest estimated arrival time, and giving transmission priority to the data stream associated with the determined time label having the earliest arrival time. In this regard, Applicants note that the outstanding Official Action apparently points to Figure 2 for the claimed features associated with the time label of each data packet. However, as discussed in the June 15th interview, Applicants' understanding of Figure 2, and the Wong reference as a whole, is that this reference simply does not disclose Claim 11's limitations of ab), ac), ad), b) or c), which all relate to the time label feature of the present invention. Thus, Applicants' Claim 11 patentably defines over the cited reference to Wong.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application. The present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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